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| 10/820,021  | 04/08/2004  | Hakaru Matsui        | PHCF-00189DIV       | 7562             |
| 21254 7590 08/05/2009<br>MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC<br>8321 OLD COURTHOUSE ROAD<br>SUITE 200<br>VIENNA, VA 22182-3817 |             |                      |                     |                  |
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| IP, SIKYIN  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/820,021

**Applicant(s)**

MATSUI ET AL.

**Examiner**

Sikyin Ip

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12, 18-22, 29, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000169918 (PTO-1449) in view of JP 07-214232.

JP 2000169918 discloses the features including the claimed copper alloy wire composition (abstract), diameter ([0002]), and step of forming said wire by drawing

(abstract). JP 2000169918 does not disclose the casting crucible and mold material, and atmosphere. However, JP 07-214232 in abstract discloses conventional steps of forming high purity copper alloy wire products including casting alloy in non-oxidizing atmosphere in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to cast alloy with crucible, mold, and non-oxidizing atmosphere as taught by JP 07-214232 in order to prevent oxidation of the molten alloy.

With respect to the purities of the starting elements that instant composition has an open composition which could include unrecited ingredients in major amounts. Moreover, it is well settled that the difference in degree of purity itself does not predicate invention. In re Merz, 38 USPQ 143 and In re King et al, 43 USPQ 400.

Claims 13-14, 23, 24, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000169918 (PTO-1449) in view of JP 07-214232 as applied to claims above, and further in view of JP 57070244 (PTO-1449).

JP 2000169918 and JP 07-214232 disclose the features substantially as claimed as set forth in the rejection above except for Mg and In alloying elements. However, JP 57070244 teaches said elements are known optional elements for wires to improve corrosion in the same field of endeavor or the analogous metallurgical art. It has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 213 (217). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

Claims 15-17, 25-26, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000169918 (PTO-1449) in view of JP 07-214232 as applied to claims above, and further in view of JP 11-293365 (PTO-1449).

JP 2000169918 and JP 07-214232 disclose the features substantially as claimed as set forth in the rejection above except for pickling. JP 11-293365 teaches to remove foreign matter with acid solution/pickling [0020]. Therefore, pickling material to remove contaminants at any stage of processing is within ambit of ordinary skill artisan.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12-14, 18-21, and 27-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S.

Patent No. 6751855. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed wire composition and steps are overlapped by wire composition and steps in claims of said patent. The Ag content 0.9 wt.% and 1 wt.% is considered close enough and not patentable distinct. In re Titanium Metals Corporation of America v. Banner, 227 USPQ 773 (Fed. Cir. 1985), In re Woodruff, 16 USPQ 2d 1934, In re Hoch, 428 F.2d 1341, 166 USPQ 406 (CCPA 1970), and In re Payne 606 F.2d 303, 203 USPQ 245 (CCPA 1979). To overcome the prima facie case, an applicant must show that there are substantial, actual differences between the properties of the claimed compound and the prior art compound. In re Hoch, 428 F.2d 1343-44, 166 USPQ 406 at 409.

Claims of cited patent do not disclose vacuum and inert atmosphere during casting. But, said vacuum and inert atmosphere without specific parameters are considered as conventional to prevent oxidization of molten materials casting.

Claims 15-17, 22-26, and 31-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6751855 as set forth above and further in view of JP 11-293365 (PTO-1449).

USP 6751855 discloses Cu alloy wire composition and processing steps except for pickling. JP 11-293365 teaches to remove foreign matter with acid solution/pickling [0020]. Therefore, pickling material to remove contaminants at any stage of processing is within ambit of ordinary skill artisan.

### ***Response to Arguments***

Applicant's arguments filed April 2, 2009 have been fully considered but they are not persuasive.

~~9:lines 33-213- Indeed, claims 1-3 of Matsui clearly teach an alloy requiring "a copper matrix of high purity copper with a total unavoidable impurity content of not more than 10 mass ppm";~~

Applicants argue that " ~~while subsequently requiring a completely different~~ mass percentage of silver in the alloy. "

But, "not more than 10 mass ppm" includes claimed "not more than 1 mass ppm".

~~solution (Office Action at page 8, last paragraph). However, Yamazaki clearly fails to teach or suggest that the purity of copper (Cu) and silver (Ag) are respectively 99.999% or more (high-purity copper having a total unavoidable impurity content of not more than 1 ppm by mass) and~~

Applicants argue that " 99.99% or more. "

First, JP 11-293365 (Yamazaki) is cited to teach pickling. Second, the difference in degree of purity itself does not predicate invention. In re Merz, 38 USPQ 143 and In re King et al, 43 USPQ 400. Third, the instant claimed Cu alloy has an open composition, which includes unrecited ingredients even in major amounts. Thus, the initial purity of each alloy element before casting has no merit to the final product purity. Fourth, the recited impurities' contents read on zero, which suggests to exclude said impurity from claimed composition. Thus, said impurity is not needed to be disclosed. The same response is reiterated to JP '918 (Ichikawa), JP '232 (Mae), or JP 244 (Komata) references.

~~have combined Ichikawa and Mae to arrive at the claimed invention. Ichikawa and Mae are directed toward two completely different objects and, thus, cannot be combined successfully. The features of Mae that the Examiner combines with Ichikawa would make Ichikawa inoperable and would require a radical change in the design of Ichikawa, and, thus, it would not have been~~

Applicants argue that " predictable for one of ordinary skill in the art to have made such a combination. "

and the same to JP 244 (Komata), or JP '365 (Yamazaki) is noted. But, applicants fail

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to point out what are the "completely different objects" and why the combination is "inoperable".

Applicants' argument with respect to JP '918 (Ichikawa), JP '232 (Mae), JP 244 (Komata), or JP '365 (Yamazaki) alone is noted. But, applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants' argument in paragraph bridging pages 9-10 of instant remarks is noted. But, instant claimed "vacuum" and "argon gas" atmospheres are included in the known non-oxidizing atmosphere (JP '232, abstract and [0015]).

Applicants argue that additive elements are introduced to alloy of JP '244. But, instant claimed Cu based alloy does not exclude any unrecited ingredients even in major amounts.

#### Conclusion

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made



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to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

#### Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sikyin Ip/  
Primary Examiner, Art Unit 1793

August 2, 2009